## STORM WATER MANAGEMENT PLAN

TPM 20938RPL1 ER 05-08-012

For: LS Hawaii Properties, LLC P.O. Box 7215 Rancho Santa Fe, CA 92067 APN 265-130-61

Prepared by Laret Engineering Company, Inc.

16091 San Dieguito Road, Suite (P.O. Box 9661

Rancho Santa Fe, CA 920

March 9, 2006

## Storm Water Management Plan For Priority Projects (Major SWMP) Job # 956

Project Name:	Tentative Parcel Map
Permit Number (Land Development Projects):	TPM 20938
Work Authorization Number (CIP):	N/A
Applicant:	LS Hawaii Properties, LLC
Applicant's Address:	P.O. Box 7215 Rancho Santa Fe, CA 92067
Plan Prepare By (Leave blank if same as applicant):	Laret Engineering Co., Inc.
Date:	March 9, 2006
Revision Date (If applicable):	

The County of San Diego Watershed Protection, Storm Water Management, and Discharge Control Ordinance (WPO) (Ordinance No. 9424) requires all applications for a permit or approval associated with a Land Disturbance Activity must be accompanied by a Storm Water Management Plan (SWMP) (section 67.804.f). The purpose of the SWMP is to describe how the project will minimize the short and long-term impacts on receiving water quality. Projects that meet the criteria for a priority project are required to prepare a Major SWMP.

Since the SWMP is a living document, revisions may be necessary during various stages of approval by the County. Please provide the approval information requested below.

Project Review Stage	Does the SWMP revisions	need	If YES, Provide Revision Date
	YES	NO	
Initial Permitting		X	
magnition - months and recent tree.			

Instructions for a Major SWMP can be downloaded at <a href="http://www.co.sandiego.ca.us/dpw/stormwater/susmp.html">http://www.co.sandiego.ca.us/dpw/stormwater/susmp.html</a>.

Completion of the following checklist and attachments will fulfill the requirements of a Major SWMP for the project listed above.

#### PROJECT DESCRIPTION

This report is intended to address the storm water runoff which could result from the approval and development of TPM 20938. This site consists of 17.7 acres of land within Ranch Santa Fe. This site is proposed to be subdivided into 3 parcels which vary in size from 4.19 to 8.12 acres. Proposed Parcel 1 is to encompass 5.40 acres and includes an existing 8,500 sf ± residence and orange groves. Proposed Parcel 2 & 3 have no existing structures on them but they both have been extensively developed with citrus groves. The existing paved driveway from El Montevideo to the existing residence within Parcel 1 is to be removed and all 3 parcels are to share 1 common private road as shown on TPM 20938. Proposed Parcel 2 & 3 will sometime in the future be developed with single family homes consistent in size with the existing residential lots surrounding this site. Two drainage basins affect this property and have been designated "La Orilla Creek" on easterly property line and designated "northerly property line" swale.

#### PRIORITY PROJECT DETERMINATION

Please check the box that best describes the project. Does the project meet one of the following criteria?

PRIORITY PROJECT	YES	NO
Redevelopment within the County Urban Area that creates or adds at least 5,000	X	
net square feet of additional impervious surface area		
Residential development of more than 10 units		X
Commercial developments with a land area for development of greater than		X
100,000 square feet		
Automotive repair shops		X
Restaurants, where the land area for development is greater than 5.000 square		X
feet		
Hillside development, in an area with known erosive soil conditions, where there		X
will be grading on any natural slope that is twenty-five percent or greater, if the		
development creates 5,000 square feet or more of impervious surface		
Environmentally Sensitive Areas: All development and redevelopment located		X
within or directly adjacent to or discharging directly to an environmentally		
sensitive area (where discharges from the development or redevelopment will		
enter receiving waters within the environmentally sensitive area), which either		
creates 2,500 square feet of impervious surface on a proposed project site or		
increases the area of imperviousness of a proposed project site to 10% or more of		
its naturally occurring condition.		
Parking Lots 5,000 square feet or more or with 15 parking spaces or more and		X
potentially exposed to urban runoff		
Streets, roads, highways, and freeways which would create a new paved surface		X
that is 5,000 square feet or greater		

**Limited Exclusion:** Trenching and resurfacing work associated with utility projects are not considered priority projects. Parking lots, buildings and other structures associated with utility projects are subject to SUSMP requirements if one or more of the criteria above are met.

If you answered **NO** to all the questions, then **STOP**. Please complete a Minor SWMP for your project. If you answered **YES** to any of the questions, please continue.

The following questions provide a guide to collecting information relevant to project stormwater quality issues. Please provide a description of the findings in text box below.

	QUESTIONS	COMPLETED	NA
1.	Describe the topography of the project area.	X	
2.	Describe the local land use within the project area and adjacent areas.	X	
3.	Evaluate the presence of dry weather flow.		X
4.	Determine the receiving waters that may be affected by the project throughout the project life cycle (i.e., construction, maintenance and operation).	X	
5.	For the project limits, list the 303(d) impaired receiving water bodies and their constituents of concern.		X
6.	Determine if there are any High Risk Areas (municipal or domestic water supply reservoirs or groundwater percolation facilities) within the project limits.		X
7.	Determine the Regional Board special requirements, including TMDLs, effluent limits, etc.		X
8.	Determine the general climate of the project area. Identify annual rainfall and rainfall intensity curves.		X
9.	If considering Treatment BMPs, determine the soil classification, permeability, erodibility, and depth to groundwater.		Х
10.	Determine contaminated or hazardous soils within the project area.	-	X

#### **DESCRIPTION OF FINDINGS**

The project is located within the Carlsbad Hydrologic Unit, San Elijo Hydraulic subarea. The area is characterized by moderate slopes and estate sized private residences on roughly two to seven acre lots. Runoff from the project drains to the adjacent private road, Vista de Fortuna. Within the project limit, there are no 303(d) impaired receiving waters.

Complete the checklist below to determine if Treatment Best Management Practices (BMPs) are required for the project.

No.	CRITERIA	YES	NO	INFORMATION
1.	Is this an emergency project		X	If YES, go to 6. If NO, continue to 2.
2.	Have TMDLs been established		X	If YES, go to 5.

No.	CRITERIA	YES	NO	INFORMATION
	for surface waters within the		X	If NO, continue to 3.
	project limit?			
3.	Will the project directly		X	If YES, go to 5. If NO, continue to 4.
	discharge to a 303(d) impaired	1		
	receiving water body?	***************************************		

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4.	Is this project within the urban and environmentally sensitive areas as defined on the maps in Appendix B of the County of San Diego Standard Urban Storm Water Mitigation Plan for Land Development and Public Improvement Projects?	If YES, continue to 5. If NO, go to 6.
5.	Consider approved Treatment BMPs for the project.	If YES, go to 7.
6.	Project is not required to consider Treatment BMPs	Document for Project Files by referencing this checklist.
7.	End	

Now that the need for a treatment BMPs has been determined, other information is needed to complete the SWMP.

#### WATERSHED

Please check the watershed(s) for the project.

	San Juan	Santa Margarita	San Luis Rey	X	Carlsbad
~~~~	A 5:				
	San Dieguito	Penasquitos	San Diego		Pueblo San Diego
	0		T		
	Sweetwater	Otay	Tijuana		
					Transmitted of the state of the

Please provide the hydrologic sub-area and number(s)

Number	Name
904.61	San Elijo Lagoon

Please provide the beneficial uses for Inland Surface Waters and Ground Waters. Beneficial Uses can be obtained from the Water Quality Control Plan for the San Diego Basin, which is available at the Regional Board office or at <a href="http://www.swrcb.ca.gov/rwqcb9/programs/basinplan.html">http://www.swrcb.ca.gov/rwqcb9/programs/basinplan.html</a>.

SURFACE WATERS	Hydrologic Unit Basin Number	MUN	AGR	IND	PROC	GWR	FRESH	POW	RECI	REC2	BIOL	WARM	СОГЪ	WILD	RARE	SPWN
Inland Surface Waters		X	X								X	X	X	X		
Ground Waters		X	X	X												
							annual account of the state of									

X Existing Beneficial Use 0 Potential Beneficial Use \* Excepted from Municipal

#### POLLUTANTS OF CONCERN

Using Table 1, identify pollutants that are anticipated to be generated from the proposed priority project categories. Pollutants associated with any hazardous material sites that have been remediated or are not threatened by the proposed project are not considered a pollutant of concern.

Table 1. Anticipated and Potential Pollutants Generated by Land Use Type

Priority Project Categories	Sediments	Nutrients	Heavy Metals	Organic Compounds	Trash & Debris	Oxygen Demanding Substances	Oil & Grease	Bacteria & Viruses	Pesticides
Detached Residential Development	х	X			х	Х	Х	х	x
Attached Residential Development	х	Х			Х	P(1)	P <sub>(2)</sub>	P	х
Commercial Development >100,000 ft <sub>2</sub>	P(1)	P <sub>(1)</sub>		P <sub>(2)</sub>	Х	P(5)	х	P(3)	P(5)
Automotive Repair Shops			x	X(4)(5)	х		X		
Restaurants				į	X	X	Х	Х	
Hillside Development >5,000 ft2	X	х	Tourist Person		Х	х	X		X

Excepted from Mamorpar

	General Pollutant Categories												
Priority Project Categories	Sediments	Nutrients	Heavy Metals	Organic Compounds	Trash & Debris	Oxygen Demanding Substances	Oil & Grease	Bacteria & Viruses	Pesticides				
Parking Lots	P(1)	P <sub>(1)</sub>	X		X	P(1)	X		P(1)				
Streets, Highways & Freeways	Х	P(1)	Х	X(4)	Х	P <sub>(5)</sub>	Х						

X = anticipated

- (1) A potential pollutant if landscaping exists on-site.
- (2) A potential pollutant if the project includes uncovered parking areas.
- (3) A potential pollutant if land use involves food or animal waste products.
- (4) Including petroleum hydrocarbons.
- (5) Including solvents.

**Note:** If other monitoring data that is relevant to the project is available. Please include as Attachment C.

#### **CONSTRUCTION BMPs**

Please check the construction BMPs that may be used. The BMPs selected are those that will be implemented during construction of the project. The applicant is responsible for the placement and maintenance of the BMPs selected.

X	Silt Fence		Desilting Basin	X	Fiber Rolls	X	Gravel Bag Berm
	Street Sweeping &	X	Sandbag Barrier	X	Storm Drain Inlet	X	Material Delivery
	Vacuuming			<u> </u>	Protection		& Storage
X	Stockpile Management	X	Spill Prevention &	X	Solid Waste		Concrete Waste
			Control		Management		Management
X	Stabilized		Water		Dewatering		Paving & Grinding
	Construction		Conservation		Operations		Operations
	Entrance/Exit		Practices				
	Vehicle & Equipment						
	Maintenance						

☐ Any minor slopes created incidental to construction and not subject to a major or minor grading permit shall be protected by covering with plastic or tarp prior to a rain event, and shall have vegetative cover reestablished within 180 days of completion of the slope and prior to final building approval.

#### SITE DESIGN

To minimize stormwater impacts, site design measures must be addressed. The following checklist provides options for avoiding or reducing potential impacts during project planning. If YES is checked, it is assumed that the measure was used for this project. If NO is checked, please provide a brief explanation why the option was not selected in the text box below.

P = potential

	OPTI	ONS	YES	NO	N/A
1.	to reco	ne project be relocated or realigned to avoid/reduce impacts eiving waters or to increase the preservation of critical (or ematic) areas such as floodplains, steep slopes, wetlands, and with erosive or unstable soil conditions?	X		
2.	Can tl	ne project be designed to minimize impervious footprint?	X		
3.	Conse	erve natural areas where feasible?	X		
4.		e landscape is proposed, can rooftops, impervious sidewalks, vays, trails and patios be drained into adjacent landscaping?	X		
5.		adway projects, can structures and bridges be designed or d to reduce work in live streams and minimize construction ats?			X
6.		ny of the following methods be utilized to minimize erosion slopes:			
	6.a.	Disturbing existing slopes only when necessary?	X		
	6.b.	Minimize cut and fill areas to reduce slope lengths?	X		
	6.c.	Incorporating retaining walls to reduce steepness of slopes or to shorten slopes?	X		
	6.d.	Providing benches or terraces on high cut and fill slopes to reduce concentration of flows?			X
	6.e.	Rounding and shaping slopes to reduce concentrated flow?	X		
	6.f.	Collecting concentrated flows in stabilized drains and channels?	X		

Please provide a brief explanation for each option that was checked N/A or NO in the following box.

N/.			
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If the project includes work in channels, then complete the following checklist. Information shall be obtained from the project drainage report.

No.	CRITERIA	YES	NO	N/A	COMMENTS
1.	Will the project increase velocity or volume of			X	If YES go to 5.
	downstream flow?				,
2.	Will the project discharge to unlined channels?				If YES go to 5.
2	Will the project increase potential sediment load				If YES go to 5.
٥.	of downstream flow?				

No.	CRITERIA	YES	NO	N/A	COMMENTS
4.	Will the project encroach, cross, realign, or cause other hydraulic changes to a stream that may affect upstream and/or downstream channel stability?			X	If YES go to 7.
5.	Review channel lining materials and design for stream bank erosion.			***************************************	Continue to 6.
6.	Consider channel erosion control measures within the project limits as well as downstream. Consider scour velocity.		A CONTRACTOR OF THE CONTRACTOR		Continue to 7.
7.	Include, where appropriate, energy dissipation devices at culverts.				Continue to 8.
8.	Ensure all transitions between culvert outlets/headwalls/wingwalls and channels are smooth to reduce turbulence and scour.				Continue to 9.
9.	Include, if appropriate, detention facilities to reduce peak discharges.			X	
10.	"Hardening" natural downstream areas to prevent erosion is not an acceptable technique for protecting channel slopes, unless predevelopment conditions are determined to be so erosive that hardening would be required even in the absence of the proposed development.				Continue to 11.
11.	Provide other design principles that are comparable and equally effective.				Continue to 12.
12.	End				

#### SOURCE CONTROL

Please complete the following checklist for Source Control BMPs. If the BMP is not applicable for this project, then check N/A only at the main category.

BM	P	YES	NO	N/A	
1.			X		
	1.a.	All storm drain inlets and catch basins within the project area shall have a stencil or tile placed with prohibitive language (such as: "NO DUMPING – DRAINS TO") and/or graphical icons to discourage illegal dumping.	er andre de de la contra del la contra de la contra del la con		
	1.b.	Signs and prohibitive language and/or graphical icons, which prohibit illegal dumping, must be posted at public access points along channels and creeks within the project area.			
2.	Desig	n Outdoors Material Storage Areas to Reduce Pollution Introduction			X
	2.a.	This is a detached single-family residential project. Therefore, personal storage areas are exempt from this requirement.		- Average of the second of the	

BM	P	· · · ·	YES	NO	N/A
	2.b.	Hazardous materials with the potential to contaminate urban runoff shall either be: (1) placed in an enclosure such as, but not limited to, a cabinet, shed, or similar structure that prevents contact with runoff or spillage to the storm water conveyance system; or (2) protected by secondary containment structures such as berms, dikes, or curbs.	X		
•	2.c.	The storage area shall be paved and sufficiently impervious to contain leaks and spills.	X		
	2.d.	The storage area shall have a roof or awning to minimize direct precipitation within the secondary containment area.	X		
3.	Desig	n Trash Storage Areas to Reduce Pollution Introduction			
	3.a.	Paved with an impervious surface, designed not to allow run-on from adjoining areas, screened or walled to prevent off-site transport of trash; or,			
	3.b.	Provide attached lids on all trash containers that exclude rain, or roof or awning to minimize direct precipitation.	X		
4.	Use F	Afficient Irrigation Systems & Landscape Design			
	consid	ollowing methods to reduce excessive irrigation runoff shall be dered, and incorporated and implemented where determined applicable easible.	X		
	4.a.	Employing rain shutoff devices to prevent irrigation after precipitation.			
	4.b.	Designing irrigation systems to each landscape area's specific water requirements.	X		
	4.c.	Using flow reducers or shutoff valves triggered by a pressure drop to control water loss in the event of broken sprinkler heads or lines.		**************************************	
	4.d.	Employing other comparable, equally effective, methods to reduce irrigation water runoff.	X		
5.	Priva	te Roads			
	The d	esign of private roadway drainage shall use at least one of the following			
	5.a.	Rural swale system: street sheet flows to vegetated swale or gravel shoulder, curbs at street corners, culverts under driveways and street crossings.			
	5.b.	Urban curb/swale system: street slopes to curb, periodic swale inlets drain to vegetated swale/biofilter.			
	5.c.	Dual drainage system: First flush captured in street catch basins and discharged to adjacent vegetated swale or gravel shoulder, high flows connect directly to storm water conveyance system.			- market start and a start and
	5.d.	Other methods that are comparable and equally effective within the project.	X	AAAA	
6.	Resid	ential Driveways & Guest Parking			
	The d	esign of driveways and private residential parking areas shall use one at of the following features.			The state of the s
	6.a.	Design driveways with shared access, flared (single lane at street) or wheelstrips (paving only under tires); or, drain into landscaping prior to discharging to the storm water conveyance system.	Х		- Principal de Aurilla
	6.b.	Uncovered temporary or guest parking on private residential lots may be: paved with a permeable surface; or, designed to drain into landscaping prior to discharging to the storm water conveyance system.	X		
	6.c.	Other features which are comparable and equally effective.			
7.	Dock	Areas			

. .

		BMP	YES	NO	N/A
	Loadii	ng/unloading dock areas shall include the following.			X
	7.a.	Cover loading dock areas, or design drainage to preclude urban run-on and runoff.			
	7.b.	Direct connections to storm drains from depressed loading docks (truck wells) are prohibited.			
	7.c.	Other features which are comparable and equally effective.			X
8.	Maint	tenance Bays		***************************************	
		enance bays shall include the following.			
	8.a.	Repair/maintenance bays shall be indoors; or, designed to preclude urban run-on and runoff.		***************************************	
	8.b.	Design a repair/maintenance bay drainage system to capture all wash water, leaks and spills. Connect drains to a sump for collection and disposal. Direct connection of the repair/maintenance bays to the storm drain system is prohibited. If required by local jurisdiction, obtain an Industrial Waste Discharge Permit.			
	8.c.	Other features which are comparable and equally effective.			X
9.		le Wash Areas			X
	1	y projects that include areas for washing/steam cleaning of vehicles shall e following.	~~~	- Annual	
	9.a.	Self-contained; or covered with a roof or overhang.			
	9.b.	Equipped with a clarifier or other pretreatment facility.			
	9.c.	Properly connected to a sanitary sewer.			
	9.d.	Other features which are comparable and equally effective.			
10.	Outdo	oor Processing Areas			X
ALEA ALEA MANAGEMENT OF THE PROPERTY OF THE PR	painting piles, operat	or process equipment operations, such as rock grinding or crushing, and or coating, grinding or sanding, degreasing or parts cleaning, waste and wastewater and solid waste treatment and disposal, and other ions determined to be a potential threat to water quality by the County adhere to the following requirements.		and the state of t	
	10.a.	Cover or enclose areas that would be the most significant source of pollutants; or, slope the area toward a dead-end sump; or, discharge to the sanitary sewer system following appropriate treatment in accordance with conditions established by the applicable sewer agency.			
	10.b.	Grade or berm area to prevent run-on from surrounding areas.			
	10.c.	Installation of storm drains in areas of equipment repair is prohibited.			
	10.d.	Other features which are comparable or equally effective.			
11.		ment Wash Areas			
	Outdo	or equipment/accessory washing and steam cleaning activities shall be.			
	11.a.	Be self-contained; or covered with a roof or overhang.			
	11.b.	Be equipped with a clarifier, grease trap or other pretreatment facility, as appropriate			
	11.c.	Be properly connected to a sanitary sewer.			
	11.d.	Other features which are comparable or equally effective.			
12.	Parki	ng Areas			X
	imple	ollowing design concepts shall be considered, and incorporated and mented where determined applicable and feasible by the County.			
	12.a.	Where landscaping is proposed in parking areas, incorporate landscape areas into the drainage design.			

		ВМР	YES	NO	N/A
Marketon -	12.b.	Overflow parking (parking stalls provided in excess of the County's minimum parking requirements) may be constructed with permeable paving.			
	12.c.	Other design concepts that are comparable and equally effective.			X
13.		Fueling Area			X
		Non-retail fuel dispensing areas shall contain the following.			
	13.a.	Overhanging roof structure or canopy. The cover's minimum dimensions must be equal to or greater than the area within the grade break. The cover must not drain onto the fuel dispensing area and the downspouts must be routed to prevent drainage across the fueling area. The fueling area shall drain to the project's treatment control BMP(s) prior to discharging to the storm water conveyance system.		and the state of t	
	13.b.	Paved with Portland cement concrete (or equivalent smooth impervious surface). The use of asphalt concrete shall be prohibited.			
	13.c.	Have an appropriate slope to prevent ponding, and must be separated from the rest of the site by a grade break that prevents run-on of urban runoff.			
TIN SALAMATANA TIN SA	13.d.	At a minimum, the concrete fuel dispensing area must extend 6.5 feet (2.0 meters) from the corner of each fuel dispenser, or the length at which the hose and nozzle assembly may be operated plus 1 foot (0.3 meter), whichever is less.			

Please list other project specific Source Control BMPs in the following box. Write N/A if there are none and briefly explain.

N/A			
I NI/A			
1 1 1 1 / 2 / 3			
- "			
I			
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I			

#### TREATMENT CONTROL

To select a structural treatment BMP using Treatment Control BMP Selection Matrix (Table 2), each priority project shall compare the list of pollutants for which the downstream receiving waters are impaired (if any), with the pollutants anticipated to be generated by the project (as identified in Table 1). Any pollutants identified by Table 1, which are also causing a Clean Water Act section 303(d) impairment of the receiving waters of the project, shall be considered primary pollutants of concern. Priority projects that are anticipated to generate a primary pollutant of concern shall select a single or combination of stormwater BMPs from Table 2, which **maximizes pollutant removal** for the particular primary pollutant(s) of concern.

Priority projects that are <u>not</u> anticipated to generate a pollutant for which the receiving water is Clean Water Act Section 303(d) impaired shall select a single or combination of stormwater BMPs from Table 2, which are effective for pollutant removal of the identified secondary pollutants of concern, consistent with the "maximum extent practicable" standard.

**Table 2. Treatment Control BMP Selection Matrix** 

Pollutant of Concern	Treatment Control BMP Categories							
	Biofilters	Detention Basins	Infiltration Basins(2)	Wet Ponds or Wetlands	Drainage Inserts	Filtration	Hydrodynamic Separator Systems(3)	
Sediment	M	H	Н	Н	L	Н	M	
Nutrients	L	M	M	M	L	M	L	
Heavy Metals	M	M	М	Н	L	Н	L	
Organic Compounds	U	U	Ū	М	L	М	L	
Trash & Debris	L	Н	U	Н	М	Н	М	
Oxygen Demanding Substances	L	М	М	М	L	М	L	
Bacteria	U	U	Н	Н	L	М	L	
Oil & Grease	M	M	U	U	L	Н	L	
Pesticides	U	U	U	L	L	U	L	

<sup>(1)</sup> Copermittees are encouraged to periodically assess the performance characteristics of many of these BMPs to update this table.

L: Low removal efficiency:

M: Medium removal efficiency:

H: High removal efficiency:

U: Unknown removal efficiency

Sources: Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters (1993), National Stormwater Best Management Practices Database (2001), Guide for BMP Selection in Urban Developed Areas (2001), and Caltrans New Technology Report (2001).

A Treatment BMP must address runoff from developed areas. Please provide the post-construction water quality values for the project. Label outfalls on the BMP map. Qwq is dependent on the type of treatment BMP selected for the project.

Outfall	Tributary Area (acres)	Q100 (cfs)	Qwq (cfs)
A-1	1.6 AC	2.75	2.75
A-2	2.0	4.3	4.3
A-3	1.1	1.9	1.9

Please check the box(s) that best describes the Treatment BMP(s) selected for this project.

#### **Biofilters**

X	Grass swale		
X	Grass strip		
	Wetland vegetation swale		
	Bioretention		

#### **Detention Basins**

Extended/ dry detention basin with grass lining
Extended/ dry detention basin with impervious lining

<sup>(2)</sup> Including trenches and porous pavement.

<sup>(3)</sup> Also known as hydrodynamic devices and baffle boxes.

#### **Infiltration Basins**

Infiltration basin
Infiltration trench
Porous asphalt
Porous concrete
Porous modular concrete block

#### Wet Ponds or Wetlands

	Wet pond/basin (permanent pool)
ľ	Constructed wetland

## Drainage Inserts (See note below)

Oil/Water separator			
Catch basin insert			
Storm drain inserts			
Catch basin screens			

#### Filtration

Media filtration
Sand filtration

## **Hydrodynamic Separator Systems**

Swirl Concentrator
Cyclone Separator
Baffle Separator
Gross Solids Removal Device
Linear Radial Device

**Note:** Catch basin inserts and storm drain inserts are excluded from use on County maintained right-of-way and easements.

Include Treatment Datasheet as Attachment E. The datasheet should include the following:	COMPLETED	NO
1. Description of how treatment BMP was designed. Provide a description for each type of treatment BMP.	X	
2. Engineering calculations for the BMP(s)	X	

N/A	

#### **MAINTENANCE**

Please check the box that best describes the maintenance mechanism(s) for this project. 13

CATEGORY	SELECTED		
CALEGORI	YES	NO	
First	X		
Second			
Third			
Fourth			

Please briefly describe the long-term fiscal resources for the selected maintenance mechanism(s).

The individual homeowner shall be responsible for maintaining the long-term di	ischarge
control.	

## **ATTACHMENTS**

Please include the following attachments.

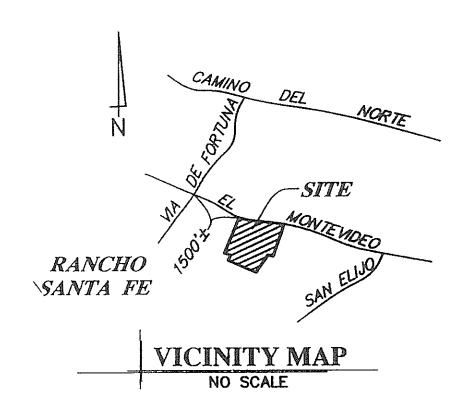
	ATTACHMENT	COMPLETED	N/A
Α	Project Location Map	X	
В	Site Map	X	
С	Relevant Monitoring Data		X
D	Treatment BMP Location Map		X
E	Treatment BMP Datasheets	X	
F	Operation and Maintenance Program for		X
	Treatment BMPs		
G	Engineer's Certification Sheet	X	

Note: Attachments A and B may be combined.

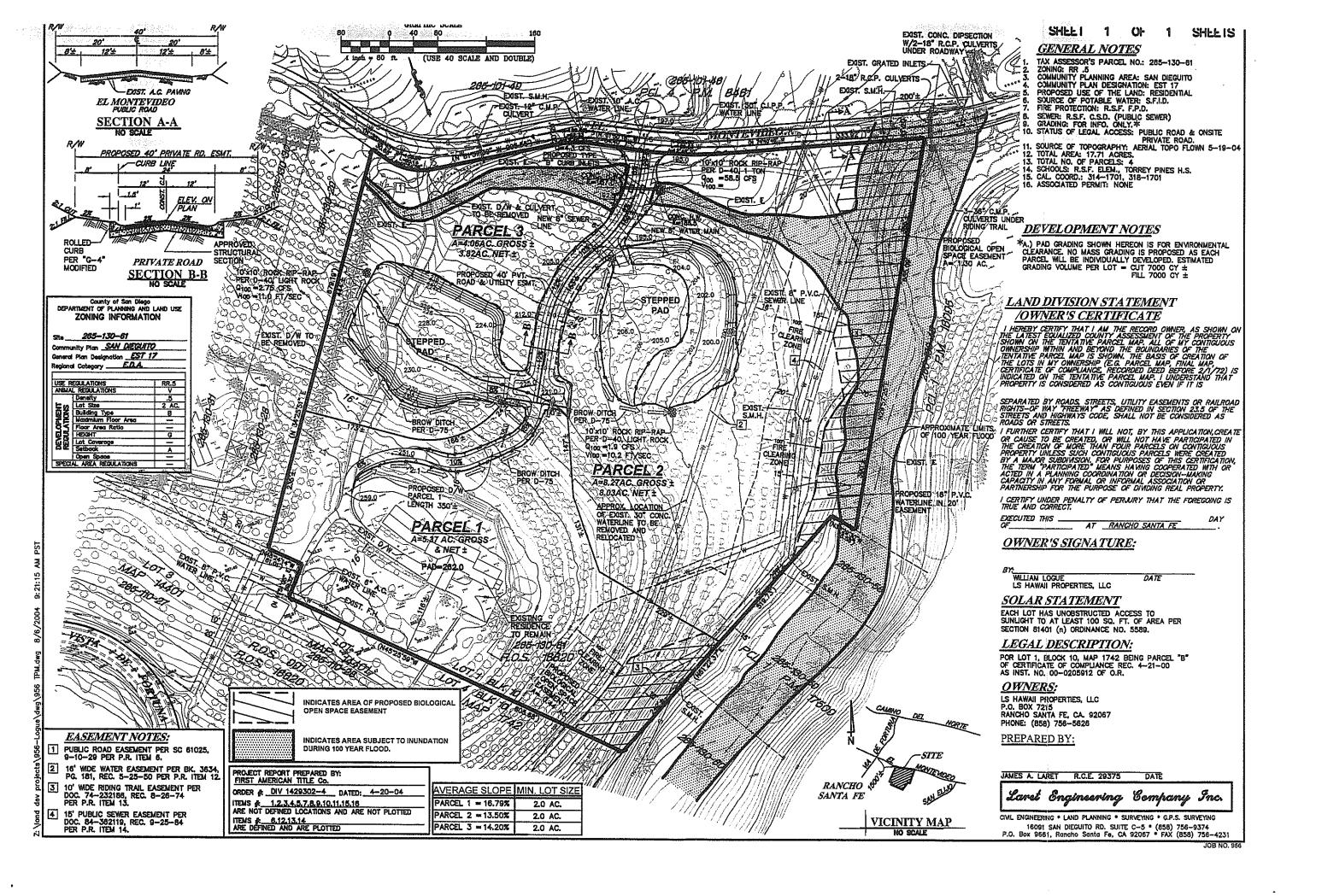
## ATTACHMENT A

 $\ldots \sim \frac{2}{3} \frac{3}{3} p_{\alpha} \left( \widetilde{p}_{\alpha}^{\alpha} \right)$ 

#### **LOCATION MAP**



## ATTACHMENT B PROJECT SITE MAP



## ATTACHMENT C

## RELEVANT MONITORING DATA

(NOTE: PROVIDE RELEVANT WATER QUALITY MONITORING DATA IS AVAILABLE.)

# ATTACHMENT D TREATMENT BMP LOCATION MAP

## ATTACHMENT E

#### TREATMENT BMP DATA SHEET

(NOTE: POSSIBLE SOURCE FOR DATASHEETS CAN BE FOUND AT <u>WWW.CABMPHANDBOOKS.COM</u>. INCLUDE ENGINEERING CALCULATIONS FOR SIZING THE TREATMENT BMP.)

#### ATTACHMENT F

#### OPERATION AND MAINTENANCE PROGRAM FOR TREATMENT BMP

(NOTE: INFORMATION REAGRDING OPERATION AND MAINTENANCE CAN BE OBTAINED FROM THE FOLLOWING WEBSITE:

HTTP://WWW.SDCOUNTY.CA.GOV/DPW/WATERSHEDS/LAND\_DEV/SUSMP.HTML.)

## ATTACHMENT G

## **CERTIFICATION SHEET**

This Stormwater Management Plan has been prepared under the direction of the following Registered Civil Engineer. The Registered Civil Engineer attests to the technical information contained herein and the engineering data upon where recommendations, conclusions, and decisions are based.

James A. Laret, R.C.E.

Date

